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METHOD FOR FACILITATING PAYMENT OF A COMPUTERIZED TRANSACTION

FIELD OF THE INVENTION

This invention relates in general to a method for facilitating a payment for a computerized transaction between a buyer and a seller using a computer network, such as the Internet.

BACKGROUND OF THE INVENTION

With the increased worldwide use of the Internet, a greater number of businesses and merchants are creating "virtual" storefronts accessible to users on the Internet. These merchants offer, for example, retail products ranging from books, compact discs, and clothing to furniture, airline tickets, and antiques, just to name a few. In fact, the Internet has become such a major vehicle for electronic commerce that many Internet businesses display their products and take orders from customers exclusively over the Internet. While the Internet provides an effective means for merchants to promote, display, or list their various products to an enormous market of potential customers, there are only a few conventional methods by which a customer or buyer can pay the merchant for any goods or services purchased electronically over the Internet.

Conventionally, an Internet user can purchase an item from a merchant over the Internet using a credit card, or by a COD (cash on delivery) service,

or by check or money order, or the like. In the credit card payment method, buyers provide their confidential credit card information to the merchant over the Internet, and the merchant processes the transaction by charging the buyers' credit card. The credit card payment method has the disadvantage of 5 inaccessibility to all potential Internet purchasers, as every Internet user may not have a credit card account with a sufficient credit limit to complete a desired transaction. Further, many Internet users are reluctant to use the credit card payment method due to the perception that confidential credit card information may be intercepted, stolen, or otherwise misused when 10 communicated over the Internet. The conventional credit card payment method may be problematic for international customers for the same reasons.

An "electronic wallet/purse" payment method also exists, wherein for on-line purchases the consumer uses an Internet "wallet/purse" account which draws against an actual checking account, credit card, or debit card. This 15 approach also has limited usefulness for consumers who do not have checking accounts or credit cards, or for consumers who choose not wish to provide the checking account or credit card account information over the Internet to establish the virtual wallet/purse.

Further, merchants are often reluctant to accept credit card orders from 20 some foreign countries due to the possibility of fraud. Also, merchants wishing to sell products to U.S. and international consumers may be hampered by the merchant's inability to obtain and establish merchant credit card

processing accounts, particularly where the merchants are international merchants without an appropriate U.S. domicile.

Accordingly, what is needed is a method for facilitating the purchase of goods and services over the Internet by consumers who either do not have credit card accounts, or choose not to provide confidential credit card account information or checking account information over the Internet. It with this background in mind that the present invention was developed.

SUMMARY OF THE INVENTION

In light of the above, and according to a broad aspect of the invention, disclosed herein is a method for facilitating a payment for a computerized transaction between a buyer and a seller using a computer network, such as the Internet. The method includes the steps of communicating, from a seller's computing station to an agent computing system, data regarding the transaction between the buyer and the seller, wherein the data identifies the buyer, the seller, and the amount of the transaction. In one example, the agent computing system is a money transfer system having a computer and a database. The agent computing system communicates transaction information displayable to the buyer. In one example, the transaction information is sent to the seller's computing station, and the seller displays the transaction information to the buyer on one or more pages of the seller's web site when accessed by the buyer. Receiving an actual payment from the buyer at a plurality of agent locations is provided for, the agent locations being in communication with the agent computing system. Upon receiving the actual

payment from the buyer at one of the agent locations, a message is communicated to the seller that the actual payment for the transaction was received at the agent location, thereby permitting the seller to begin shipment of the item to the buyer. Funds are transferred to the seller, and in one 5 example, the agent computing system transfers funds into an account established with the seller.

In one embodiment, the transaction information includes a confirmation number created by the agent computing system for identifying the transaction. The transaction information can also include an order number corresponding to 10 a merchant order number provided by the merchant for identifying the transaction; a new total price which is the amount of the transaction plus a processing fee due from the buyer payable at the agent location; and an exchange rate between a first local currency usable to the buyer and a second currency usable by the seller. The total price of the transaction can be 15 expressed in the first local currency usable by the buyer, so that the buyer can pay at the agent location in the buyer's local currency. Preferably the funds transferred to the seller from the agent computing system are paid in the second currency usable by the seller.

According to another broad aspect of the invention, disclosed herein is a 20 method for processing a payment for a computerized transaction between a buyer and a seller for the purchase of an item, wherein the transaction being initiated over a computer network such as the Internet. The method includes providing an agent computing system coupled to the computer network, the

agent computing system adapted to communicate with a seller's computing station over the computer network; providing a plurality of agent payment locations accessible to the buyer, the agent payment locations communicating with the agent computing system over the computer network; communicating, 5 from the seller's computing station to the agent computing system, data regarding the transaction between the buyer and the seller, wherein the data identifies the buyer, the seller, and the amount of the transaction; communicating transaction information to the buyer from the agent computing system; providing for receiving an actual payment from the buyer at one of the 10 agent payment locations; and upon receiving the actual payment from the buyer at one of the plurality of the agent payment locations, communicating to the seller that the actual payment for the transaction was received at the agent payment location, thereby permitting the seller to begin shipment of the item to the buyer. Preferably, the agent computing system transfers funds to the seller 15 in a currency usable by the seller.

The foregoing and other features, utilities and advantages of the invention will be apparent from the following more particular description of a preferred embodiment of the invention as illustrated in the accompanying drawings.

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BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 illustrates a block diagram of a system for facilitating a transfer of a payment for a computerized transaction between a buyer and a seller using

a computer network, such as the Internet, in accordance with one embodiment of the present invention.

Fig. 2 illustrates the logical operations for a buyer/consumer to select the payment method for a computerized transaction in accordance with one embodiment of the present invention.

Fig. 3 illustrates the logical operations for an electronic transaction to be completed according to one embodiment of the present invention.

Fig. 4 illustrates a computer screen wherein an example of a merchant's web site is shown and the buyer/consumer has selected an item to purchase by an electronic transaction over the Internet.

Fig. 5 illustrates a computer screen wherein an example of a merchant's web site is shown and the buyer/consumer has entered shipping information for the electronic transaction of Fig. 4.

Figs. 6A-D illustrate a series of exemplary computer screens wherein an example of a merchant's web site is shown and the buyer/consumer has selected the payment method in accordance with one embodiment of the present invention, and the confirmation information and transaction number are displayed to the buyer/consumer in accordance with one embodiment of the present invention.

Figs. 7A-B illustrate an example computer screen wherein information relating to agent locations is shown.

Fig. 8 illustrates an example of a form generated containing the electronic transaction information, the form being suitable for use by the agent

at the agent station, in accordance with one embodiment of the present invention.

- Fig. 9 illustrates the logical operations of an alternative embodiment of the present invention for a buyer to select the payment method for a computerized transaction with a seller who uses a bidding process on the web site, in accordance with one embodiment of the present invention.

Fig. 10 illustrates the logical operations performed by an agent location in order to process an electronic payment transaction in accordance with one embodiment of the present invention.

- Figs. 11A-11C illustrate exemplary computer screen displays of a computer operating at the agent location.

Fig. 12 illustrates an example schema for the message delivery queuing system in accordance with one embodiment of the present invention.

- Fig. 13 illustrates device queue records of the message delivery queuing system in accordance with one embodiment of the present invention.

Fig. 14 illustrates an example of a delivery mechanism for the agent computing system to communicate with an agent location, in accordance with one embodiment of the present invention.

- Fig. 15 illustrates an example of a delivery mechanism for the agent computing system to communicate with an agent location, in accordance with one embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In accordance with the embodiments of the present invention, a method for facilitating payment of a computerized transaction is disclosed herein. The 5 method can be implemented using a computing system coupled to a network, such as the Internet. The method generally permits a customer/buyer to select an electronic payment method for a purchase, obtain confirmation information regarding the transaction, and provides for the customer/user to make an actual payment for the transaction at one of a plurality of payment locations 10 accessible to the buyer. The actual payment is preferably a cash payment, although the payment could also be in the form of a check, money order, credit card, or the like.

Upon receiving the payment from the buyer at one of the payment locations, the seller is notified over the Internet that the actual payment for the 15 transaction was received at a payment location, and the seller can then ship the purchased items to the buyer. In this manner, a buyer can use the payment method of the present invention to pay for an item purchased over a computer network without the need for having to use a credit card, and without having to provide confidential information, such as a credit card account number or a 20 bank account number, over the Internet.

Referring to Fig. 1, a block diagram of a system for facilitating a transfer of a payment for a computerized transaction is shown, in accordance with one embodiment of the present invention.

A buyer or customer 30, having a buyer's computing station 32, communicates with a merchant's or seller's computing system 34 over a computer network 36, such as the Internet. The merchant or seller's computing system 34 can include a server 38 which hosts the merchant's web site 40 for access by a plurality of potential buyers over the Internet. The merchant's web site 40 is, in accordance with the present invention, adapted to display an electronic payment method in accordance with the present invention, referred to herein as "FLASHCASH (SM)" or as the electronic payment method of the present invention. The merchant's web site 40 is adapted to 5 display an icon, or other user-selectable indicia, to launch the electronic payment method described herein.

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An agent computing system 42 (also referred to herein as a money transfer system) is also shown in Fig. 1, which is responsible for processing incoming requests from merchants or buyers regarding the electronic payment. 15 In one example, the agent computing system 42 has a staging area 44 and a payment confirmation queue 46. The staging area 44 is used to queue and track incoming transaction requests. For instance, upon the buyer selecting an item for purchase and selecting the electronic payment method, the merchant's server 38 generates an electronic payment request which is transferred to the agent computing system 42. The agent computing system 42 receives the request, and creates a unique record of the request and stores the unique record in the staging area 44. Further operations performed by the agent 20 computing system/money transfer system are described below.

The record includes data regarding the transaction, including, for example, the buyer's identification (such as a name, e-mail address, physical address, etc.), the seller's identification (the seller's name, physical address, phone number, e-mail address, etc.), the date of the transaction, a summary of

5 the item or items being purchased, along with the purchase and shipping price for the items, and a total price for the transaction. Further, the agent computing system 42 assigns a unique transaction or confirmation number, to each incoming transaction request. This number is uniquely and permanently associated with the particular transaction during the life of the transaction. In

10 one example, the transaction number is used as a reference number for the transaction until the transaction has been completed (i.e., the buyer has made the payment at the agent location). In one example, the uniqueness of the transaction number is limited from the time beginning when the transaction is initiated, to the time in which the buyer required to make the payment or once

15 the payment has been made. After this time, the transaction number may be re-used by the agent computing system 42 to track another transaction. In one example, once the buyer makes the payment due, a money transfer control number, also being unique for each transaction, is provided as proof of payment or receipt.

20 Optionally, the agent computing system 42 can also associate an order number provided by the merchant for the merchant's tracking of the transaction. When the buyer has made an actual payment to one of the plurality of agent locations 48, the agent computing system 42 moves its

record of the transaction from the staging area 44 to the payment confirmation queue 46, so that the seller can be notified of the buyer's payment, and the funds can be transferred to the seller.

- As will be described below, the agent computing system 42 can also
- 5 associate various exchange rates with the transaction based on the geographic location of either the buyer or the seller, and provide a calculated total price due by the buyer in a local currency usable by the buyer. In this manner, a buyer in a foreign country can purchase and employ the electronic payment method of the present invention to purchase an item using foreign currency,
- 10 while the seller is paid for the transaction using its own local currency. In one example, the currency information associated with the transaction by the agent computing system is derived from the shipping information (i.e., buyer's and seller's addresses) shown in Fig. 5.

Fig. 1 also illustrates a plurality of agent locations 48 accessible to the

15 buyer. Agent locations 48 may include any device capable of communicating with the agent computing system 42 and transferring value to the agent computing system 42 to complete payment of the transaction. The agent locations 48 are, in one example, physical business locations wherein the buyer can walk into one of the agent locations in order to physically make an actual

20 payment in accordance with the present invention. In another example, agent locations 48 include stand-alone computing systems with money-transfer capabilities, such as an automatic teller machine (ATM) adapted to communicate with and transfer funds to the agent computing system 42.

Preferably, the agent locations 48 are located throughout cities and in various countries globally, so that a buyer can give an actual payment to one of the many agent locations 48 located throughout the world. Preferably, each agent location 48 is equipped with the capability to communicate, either by

5 computer network or otherwise, with the agent computing system 42 to reference any of the transactions stored in the agent computing system 42. For instance, the plurality of agent locations 48 can be provided with computing systems which are coupled to and in communication with the agent computing system 42 over a computer network, such as the Internet or other computing

10 network. Alternatively, other computing systems such as ATMs or the like can access the agent computing system 42.

A payment gateway 50 is also shown in Fig. 1. The payment gateway 50 is a means by which merchants optionally handle the processing of orders. Payment gateway 50 is generally provided to the merchant by a third-party service provider, to process payments. For instance, the payment gateway known as "CyberCash" provides payment software and services enabling conventional electronic commerce for merchants. The payment gateway 50 is a means by which the merchant offloads the transaction processing which would normally be handled at the merchant's server. However, not all Internet

15 merchants use a third-party payment gateway. For example, at present, the amazon.com merchant web site has its own internal payment gateway for processing payments.

Hence, communications to and from the agent computing system 42 and the merchant's computing system 34 can be handled either by the payment gateway 50 or by the merchant's server 40 directly, depending upon the particular implementation chosen by the merchant. Accordingly, the 5 functionality of the merchant's computing system 34 to communicate with the agent computing system 42 and the merchant's particular payment gateway could be included within the merchant's computing system 34.

In overall general operation, and referring to Fig. 1, the buyer 30 makes a purchase using the buyer's computing station 32 over the Internet 36 by 10 accessing the merchant's web site 40, and the buyer selects the electronic payment method of the present invention as a way to pay for the purchase (instead of purchasing by using an credit card or other conventional means). The merchant's computing system 34 then communicates the transaction either to the payment gateway 50, or directly to the agent computing system 42, 15 depending upon the particular implementation, for processing by the agent computing system 42 in accordance with the present invention. The operations shown in Figs. 2-3 and the information shown in Figs. 4-9 further illustrate various aspects of the invention.

Referring now to Fig. 2, the logical operations for a buyer to select the 20 payment method under the present invention are shown. At operation 100, the buyer selects goods to be purchased and places the goods in a virtual shopping cart. At operation 102, the buyer proceeds to the checkout section of the merchant's web site. At operation 104, the buyer enters the appropriate

shipping information to have the goods delivered as the buyer desires, and at operation 106, the buyer selects the desired shipping method. At operation 108, the charges relating to the transaction (including the cost of the goods and the shipping charges) are totaled.

- 5 At operation 110, the buyer selects the desired method of payment for the transaction. Decision operation 112 determines if the electronic payment method of the present invention has been selected. If no, then operation 114 submits the order to the merchant for processing as is conventionally performed. However, if decision operation 112 determines that the electronic
10 payment method of the present invention has been selected by the buyer, then operation 116 re-totals the charges to include a processing fee associated with the present invention. Operation 118 then submits the order to the merchant, and submits the order to the agent computing system in accordance with the present invention. At operation 120, the agent computing system logs the
15 transaction and generates a confirmation number, which is preferably communicated to the merchant and to the consumer preferably through the merchant. The agent computing system 42 may communicate confirmation information using a variety of communications methods, such as, for example, facsimile transmission, automated telephonic response units, E-mail, personal
20 digital assistants (PDAs), or the like.

Referring to Fig. 3, the logical operations for the completion of an electronic transaction are illustrated according to one embodiment of the present invention. In response to a request to initiate a transaction, the agent

- computing system creates a "will pay" transaction and generates a confirmation number at operation 130. The "will pay" transaction is the internal record to the agent computing system which contains the information regarding the particular transaction, including the buyer's information, the seller's
- 5 information, and a unique confirmation number associated with the transaction.
- At operation 132, the agent computing system passes the confirmation number to the merchant via the payment gateway, or directly to the merchant's server.
- At operation 134, the merchant passes the confirmation number to the consumer along with an order acknowledgment.
- 10 One feature of the present invention is that the agent computing system can optionally track the timeliness of the payment by the consumer. Decision operation 136 determines whether the consumer completes the transaction within an allotted number of days, as governed by an agreement between the merchant and the consumer. Operation 136 can be easily performed by the
- 15 agent computing system through the use of a timer or date stamps associated with the transaction. In this manner, the agent computing system can track whether a particular transaction has become "stale" or whether the transaction can still be completed by timely payment of the consumer. It is understood, however, that operation 136 is optional.
- 20 At operation 138, the consumer visits any agent location worldwide, and provides the agent location with the confirmation number associated with the particular transaction. At operation 140, the agent location references the confirmation number to determine the total amount due from the consumer.

This amount due can be expressed either in the same currency as used by the seller, or in a local currency usable by the buyer.

At operation 142, the consumer pays at the agent location, preferably using cash. However, the agent location could also be equipped to securely 5 accept credit cards, checks, or other forms of payment. In this manner, the consumer has made a payment at a physical location, as opposed to having to communicate confidential credit card account information or checking account information over the Internet.

At operation 144, the agent computing system creates a "have paid" 10 transaction, indicating that the consumer has paid the amount due for a particular transaction. At operation 146, the agent computing system notifies the payment gateway or the merchant directly to indicate to the merchant that the payment has been received. Preferably, the notification operation 146 is performed as quickly as possible, and preferably over a high-speed computer 15 link, so that the merchant is promptly informed of the payment by the buyer.

At operation 148, in response to receipt of the notification of the buyer's payment, the seller initiates the shipment of the order of the item to the buyer.

At operation 150, the funds for the transaction are transferred to the seller to complete the transaction, under the direction of the agent computing system.

20 The amount of the funds transferred to the seller are, in one example, the purchase price plus the shipping costs, and in another example, discounted by a transaction fee and/or a percentage fee of the transaction. It is understood that operation 150 could occur in parallel with operations 144 and 146. The funds

transferred by operation 150 can be in a currency usable by the seller, such currency being the same or different currency as provided by the buyer at operation 142. In this way, purchasers in a foreign country can effect the transaction using currencies local to the purchasers but different than that used
5 by the seller if the seller is located in a different country.

In one embodiment, if the consumer does not complete the transaction within the allocated number of days, the agent computing system can optionally cancel the transaction at operation 152, and at operation 154 optionally notify the payment gateway, or the merchant directly, that the
10 transaction has been cancelled. At operation 156, the merchant optionally notifies the consumer that the transaction was cancelled due to the buyer's failure to provide a timely payment, and further that no goods will be shipped or services provided in accordance with the transaction.

Figs. 4-7 illustrate examples of display screens as displayed to a
15 purchaser through the merchant's web site. Referring to Fig. 4, an example merchant's web site 180 is shown with an item 182 for purchase. Referring to Fig. 5, the merchant's web page 180 is shown which queries for shipping information 184A from the buyer, including the buyer's name, the buyer's address, the buyer's country, and other information such as the buyer's
20 telephone number. The buyer provides that information to the merchant through shipping web page 180 of Fig. 5.

Product and shipping cost field 186 indicates the subtotal for the purchase of the items 182. Web page 180 of Fig. 5 preferably includes an

indication of the number of items being purchased and the cost per item, as well as the shipping costs associated with the transaction.

Referring to Figs. 6A-E, the merchant's web site then displays a series of web pages regarding the electronic payment in accordance with one embodiment of the present invention. Referring to Fig. 6A, the merchant web page 180 displays the information 182 about the item(s) selected for purchase by the buyer, fields 184B regarding billing information, field 186 showing the cost of the items and shipping, and payment method fields 188 having a variety of user selectable fields 190A, 190B, 190C, 190D which provide the user with various payment methods. In accordance with the present invention, the user selectable field 190B provides the buyer with the option to pay for the transaction using the methods described herein.

Upon the user selecting the electronic payment method association with field 190B, the information is displayed to the buyer about the transaction so that the buyer can proceed with completing the transaction using the electronic payment method of the present invention.

Referring now to Fig. 6B, the merchant web page displays further information regarding the electronic payment method of the present invention. A payment method indicator field 192 indicates and confirms to the buyer that the electronic payment method of the present invention has been selected. A link 194 is provided for information regarding the electronic payment method so that the purchaser can obtain information, details, and answers to frequently asked questions. A link 196 provides the buyer with information relating to

the geographic addresses of the agent locations where the buyer can complete the transaction. For instance, as shown in Fig. 7A, information regarding agent locations can be provided to the user in geographic locations specified by the user. More specific information about a particular agent location can 5 also be provided, such as the information shown in Fig. 7B.

Referring back to Fig. 6B, merchant web page 180 also displays exchange rate information 198 between the currency of the seller and the currency local to the buyer. A purchase total field 200 is expressed in the local currency and converts the amount in field 186 (cost of the items being 10 purchased plus shipping costs, as expressed in the seller's currency) into an amount expressed in the local currency of the buyer.

A transaction fee field 202 indicates the cost to the buyer for using the electronic payment service provided by the agent computing system and the plurality of agent locations. In one example, the transaction fee field is 15 expressed in the local currency of the buyer. A grand total field 204 indicates the total amount to be paid by the buyer to the agent location nearest the buyer, in order to complete the transaction. Preferably, the grand total field 204 is expressed in the same currency as used by the buyer. In one example, the amount shown in fields 200, 202 and 204 are based upon a current 20 exchange rate and calculated by the agent computing system at the time the transaction is being processed thereby. By expressing the product prices in the currency of the seller and the purchase costs (i.e., fields 200, 202 and 204) in

the currency of the buyer, international transactions are more easily facilitated by the present invention.

A "complete checkout" user-selectable control 205 is provided so that the buyer can complete the on-line portion of the transaction. Upon the user 5 selecting the control 205, the transaction is processed and information regarding the transaction obtained from the merchant's web pages (i.e., Figs. 5 and 6A-B) is sent to the agent computing system/money transfer system 48 and processed therein, as described in operations 116, 118, and 120 in Fig. 2 and operations 130, 132, and 134 of Fig. 3.

10 After the agent computing system has assigned a confirmation number to the transaction and compiled the other information regarding the transaction, the agent computing system communicates this information to the merchant's server for communication to the buyer as shown in Figs. 6C-D. In Figs. 6C-D, the merchant's web site displays an "order confirmation" page 15 which contains a variety of information fields. A confirmation number field 208 is displayed within the order confirmation page which shows the transaction number created by the agent computing system and uniquely assigned to this transaction. A shipping information field 184A contains the shipping data as previously specified by the buyer, and billing information 20 184B specified by the buyer is also preferably displayed.

An instruction field 206 is also displayed within an "order confirmation" section of the merchant's web page 180 (shown in Fig. 6C). The instruction field 206 preferably indicates that the buyer should print a copy of the order

confirmation page, or at a minimum write down the confirmation number shown in field 208, for later use. The buyer is instructed to take this information, together with the payment, to the nearest agent payment location. A link 196 to a list of the nearest agent payment locations is also provided on 5 page 180, for ease of use by the buyer. An information link 194 about the electronic payment method can also be displayed within page 180 of Figs. 6C and 6D.

While Figs. 6A-D show a number of fields and links containing a variety of information, it is understood that the information can be displayed in 10 different combinations or throughout one or more web pages of the merchant's web site, and additional information can be provided as well, if appropriate. For example, contact information regarding the seller, such as the seller's e-mail address, toll-free telephone number, fax number, web site address, and/or mailing address can also be included in the confirmation page display. 15 Upon the buyer making payment for the transaction at an agent payment location, a money transfer form can be generated by the agent payment location or by the agent computing system for transmission to the merchant seller. An example of such a money transfer form 218 is illustrated in Fig. 8. The form contains a sender field 220, identifying the name and address of the 20 buyer. A confirmation number field 222 is also indicated, as well as an optional order number field 224 corresponding to an order number specified by the merchant for identifying the transaction. This order number field 224 is communicated by the merchant's web server to the agent computing system as

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part of the information communicated regarding the transaction when an electronic payment transaction is initially requested.

A total amount paid field 226 is also indicated on the money transfer form 218 which indicates the amount of money paid by the buyer at the agent
5 payment location.

Preferably, each Internet merchant adapts their web site to include an electronic payment option in accordance with the present invention. The merchant and the entity operating the agent computing system and the plurality of agent locations would agree to the terms and conditions of the services
10 being offered by the entity. The entity could then add and register the merchant within the agent computing system, as well as within the plurality of agent locations, so that the processing of the electronic payment transactions is simplified.

While the methods of the present invention have been described with
15 respect to computerized transactions initiated by a buyer over the Internet, it is understood that the same method could be applied if the buyer initiates the transaction using other sources. For example, a buyer could communicate with the merchant and place an order by telephone or fax, wherein the merchant would then generate an electronic payment transaction request as described
20 above. Additionally, a variety of computing input devices usable by the buyer are contemplated, including a conventional personal computer having web browsing capabilities, a cellular phone or personal digital assistant having web

browsing capabilities, or a kiosk or other computer input device computing with the merchant's server over a computer network such as the Internet.

The methods of the present invention have been described with respect to a merchant having a merchant server which controls the merchant's web page or virtual storefront. However, the methods of the present invention can also be used to facilitate transactions between a buyer and a non-merchant seller, such as an individual selling an item on an auction web site (e.g., eBay.com). In Fig. 9, the eBay auction web site is used as an example, along with the billpoint person-to-person credit card payment service provided on the eBay web site.

In the example of Fig. 9, it is assumed that the BillPoint service has made the electronic payment method of the present invention available to the seller and buyer on eBay as one of the payment choices. Referring to Fig. 9, at operation 240 the buyer places a successful bid on the eBay web site, where the seller has listed an item for sale by auction. At operation 242, the seller and buyer agree to use the "FlashCash" electronic payment of the present invention as the method of payment for the auction transaction.

At operation 244, the seller or buyer uses the BillPoint service of eBay to submit the transaction to the agent computing system shown in Fig. 1.

20 Information regarding the auction is passed to the agent computing system, such as the names and addresses of the buyers and sellers, the item purchased, the price preferably including shipping costs, the auction number, and the date.

At operation 246, the agent computing system assigns a unique confirmation number to this transaction, and communicates this confirmation number to the seller. Operation 246 also communicates the total amount owed payable by the buyer, and can express this amount in a local currency if appropriate, as previously described. At operation 248, the seller provides the transaction number and other payment information to the buyer, and at operation 250, the buyer pays the specified payment amount to the agent at one of the agent locations.

At operations 252-254, confirmation of the payment is communicated from the agent computing system to BillPoint on eBay in order to notify the seller of the buyer's payment. At operation 256, BillPoint notifies the seller that the payment was made by the buyer, so then at operation 258 the seller can ship the goods to the buyer. At operation 260, the funds received at the agent location for the purchase price and shipping costs are transferred to the seller under the direction of the agent computer system. As indicated previously, the funds can be transferred in a currency usable by the seller which is different from the currency used by the buyer.

Upon completion of the online portion of the transaction by the buyer, the agent computing system/money transfer system 42 makes the transaction record available for access by any one of the plurality of agent locations 48 in order to complete the transaction. In particular, the transaction is completed after the buyer visits an agent location and tenders payment for the transaction, at which time the agent location accesses the transaction records stored at the

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agent computing system/money transfer system 42. Fig. 10 illustrates the logical operations performed at the agent location for completing the transaction.

- At operation 280 of Fig. 10, a buyer visits an agent location and
- 5 requests to complete the transaction by tendering payment (i.e., paying the grand total amount indicated in field 204 of Fig. 6C). At operation 282 and in one example, the local agent at the agent location initiates software operating on the agent's local computer. As will be described with reference to Figs. 14 and 15, the agent's local computer can be simple or complex, and is preferably
- 10 coupled to a network in communications with the agent computing system/money transfer system 42. At operation 284, the local agent initiates software operations which are adapted to obtain information regarding the electronic payment transaction particularly specified by the buyer at operation 280. At operation 286, the local agent enters the transaction
- 15 number/confirmation number (i.e., the transaction number indicated in field 208 of Fig. 6D) into a query screen, and operation 288, the local agent submits the query/request to the agent computing system/money transfer system 42.

- Upon receiving the local agent's query/request, the agent computing
- 20 system/money transfer system 42 then searches its database for information relating to the transaction identified by the transaction/confirmation number specified by the local agent at operation 286. If the transaction is found, decision operation 290 passes control to operation 292. If, however, the

transaction is not found, decision operation 290 informs the local agent that the specified transaction number is invalid, whereupon the local agent can repeat operations 286-288 with a different transaction number.

- Preferably, operations 282-288 are performed by a local agent having a
- 5 computing system connected over a network to the agent computing system/money transfer system 42. It is understood, however, that operations 282-288 could be performed by a local agent communicating with the agent computing system/money transfer system 42 via facsimile, telephone, or other like means. Furthermore, it is understood that the local agent
- 10 functions could be integrated within the software of an automatic teller machine (ATM) or other like system.

At operation 292, the local agent can optionally verbally confirm, with a person having access to the records of the agent computing system/money transfer system 42, or with the buyer, that the correct transaction has been

15 found.

At operation 294, the local agent collects payment from the buyer for the transaction. The amount of the payment collected is preferably in the currency local to the buyer, and preferably corresponds to the amount specified in field 204 of Fig. 6C.

20 At operation 296, the local agent then submits a message or record to the agent computing system/money transfer system 42 indicating that the buyer has tendered the payment for the transaction and that the local agent has received such payment.

- Operation 298 determines if the transaction amount exceeds compliance limits (e.g., Texas compliance limit of \$1,000 on international transfers). If not, then control is passed to operation 300 wherein the agent computing system/money transfer system 42 returns a money transfer control number to the local agent. The money transfer control number provides proof of payment for the buyer's records as well as the records of the local agent. At 5 operation 302, the local agent provides a receipt to the buyer indicating that the transaction has been completed. The receipt, in one example, is preferably in the form as shown in Fig. 8.
- 10 If operation 298 determines that the transaction amount exceeds the compliance limits, then control is passed to operation 304 wherein the local agent solicits additional information from the buyer (e.g., occupation, social security number, and/or other identification). At operation 306, the local agent enters the additional information into the local agent's computing system 15 and transmits this information to the agent computing system/money transfer system 42 for processing therein and approval thereof.

Upon completion of the transaction at operations 296, 300 and 302, the agent computing system/money transfer system 42 transmits a message to the merchant's computing system indicating that payment for the transaction has 20 been received by the local agent 48. The agent computing system/money transfer system 42 preferably transfers funds to the merchant in the amount of the cost of the goods plus the cost of shipping, discounted by any transaction fees charged to the merchant. Preferably, the money transferred to the

merchant is transferred in the currency specified by the merchant. The merchant ships the goods purchased by the buyer to the buyer at the buyer's shipping address (for example, as specified in field 184 of Fig. 6D). The entire transaction is then complete.

- 5 Figs. 11A-11C illustrate exemplary computing screen displays at a local agent. As shown in Figs. 11A-11C, a variety of information relating to the transaction is made accessible to the local agent. Referring to Fig. 11A, the local agent enters the transaction number which the buyer presents to the local agent (i.e., the transaction number specified in field 208 of Fig. 6D). In
10 Fig. 11B, the local agent is then provided with information relating to the transaction, including information relating to the buyer, and information relating to the seller. Further, the exchange rate can be displayed, as well as a financial summary indicating the amount to collect from the buyer.

- In Fig. 11C, after the local agent has received payment from the buyer,
15 the local agent transmits a message to the agent computing system/money transfer system 42 that the payment has been received. In response, and as shown in Fig. 11C, a money transfer control number is generated by the agent computing system/money transfer system 42 and communicated to the local agent 48. The local agent then provides this money transfer control number to
20 the buyer as proof of the buyer's payment.

Preferably, a message delivery queuing system is used to communicate messages between, for instance, the merchant's computing system 34, the agent computing system/money transfer system 42, and one or more agents at

agent locations 48. The delivery queuing system is preferably implemented across the software devices employed by the merchant's computing system 34, the agent computing system/money transfer system 42, and one or more agents at agent locations 48. As described herein and depending on the flow direction 5 of a particular message, the merchant computing system 34, the agent computing system/money transfer system 42, and one or more agents at agent locations 48 can be senders or receivers of a message.

The queuing system separates the many pieces of a messaging system to allow independent customization at the point where it is needed. The form and 10 method of the initial capture are not captive to the output format or technology. The messages may be in any of several formats depending on sender preferences, receiver requirements, message type, output hardware and communications protocol. The receiver (in one example, the agent at the agent location 48) preferably may receive the message directly from the money 15 transfer system 48, or it may be delivered through some other delivery system. The message output may occur as soon as possible after receipt of another message or it may be scheduled to match the receiver's hours of operation.

The queuing system allows for the initiation of several output messages as a consequence of actions taken on a money transfer or message. The sender 20 is relieved of the knowing many of the delivery requirements of the receiver even if the delivery mechanism should change between receipt of the input and the delivery of the output.

- The output message sent to the receiver is delivered singly during the hours specified or in a batch as specified by the receiver. The message output may be routed directly upon selection of this receiver by the sender at recording time. Alternatively, the sender may provide the message type and
- 5 the receiver's address and the system will route the output through a third party delivery system, for example.

Each sender interaction with the system is captured in one of two types of message records. These records contain the sender information, identify the recipient and the means to get the message to the recipient, and the message

10 itself. Preferably, each of these records is uniquely identified by a control number, and duplicate control numbers are not allowed. Valid control numbers are guaranteed to identify exactly one message record.

The delivery queuing system is preferably implemented using CODASYL database structures and memory resident data extracted from these

15 records. Using the member-owner relationship, sorted sets, and key data that uniquely identifies records, an efficient and highly controllable mechanism is built. The queuing system preferably functions in real time.

Each "client" computing system (i.e., the merchants' computing system or the computing system operating at the agent location 48) or third party

20 delivery system is uniquely identified within the system as a "client" record. These message recipients can be made available to the sender via a pull down list of aliases shown at recording time. In one example, third party delivery

systems are not explicitly identified by the sender but are merely the vehicle through which a message will be routed.

As shown in Fig. 12, within the client record is a list of device identifiers to which the output for this client should be queued. Each of these 5 device identifiers is the key to a "device" record. The device record reflects the format in which the message is to be delivered to the receiver. Device records are also configured as being in a certain "class" as determined by the needs and limits of the client's receiving mechanism. Depending on the capabilities of the client, the device record may allow only one or several 10 message deliveries to be outstanding at any time depending in part upon the sophistication and technology of the computing systems involved and the volume of traffic. Each record allows for delivery times to be customized to serve the needs of the client.

Preferably, the memory image of the device record is updated whenever 15 the database device record is updated. This may be through a database maintenance routine update, the arrival of a new item for delivery to this device, moving an item to the "delivery in progress" queue, or completion of the delivery, for example.

As shown in Fig. 13, in one example, attached to the device record are 20 three ordered sets of "device queue" records. Messages are queued for delivery through this device by placing the unique message control number in a device queue record that is owned by the device record. These three sets represent

messages awaiting delivery, messages currently being delivered, and messages awaiting confirmation of delivery.

Senders may put messages into the system through several channels.

For example, a voice-originated message may be entered via a terminal
5 operated by an operator. Alternatively, an agent may enter the message using
a terminal located at his storefront. Individual messages may be collected
together and delivered to the agent computing system/money transfer system
42 from a third party messaging business. Preferably, all sources connect to
the agent computing system/money transfer system 48 by way of one of the
10 network nodes.

Depending upon the client or third party receiver's volume and level of
technology, delivery of the message may be done on an item by item basis or a
bulk delivery may be done at specified intervals during the day.

As shown in Fig. 14, smaller clients with low technology levels and low
15 volumes may be set up with a modem and a printer, for example, to act as
single item delivery boxes. The printer may be loaded with special paper,
check stock for instance. A personal computer for example, with up to 28
output ports configured, acts as a single item delivery computer and requests
work based on its configuration parameters and port availability. These
20 parameters match the class of the device record. The single item delivery
computer communicates with a Network Node via a high-speed LAN
connection.

- As shown in Fig. 15, for bulk delivery of messages, large volume clients may receive a file containing any number of message items using higher speed connections. These deliveries may be scheduled to occur several times per day and at times depending upon the day of the week. For these clients, the
- 5 network node stands in for the single item delivery box and periodically requests the messages from the database server. The messages are collected until the first message recording time which occurs after the opening of a delivery window.
- As shown in Figs. 14 and 15, the network nodes provide security for the
- 10 database server of the agent computing system/money transfer system 42. Preferably, all delivery system interactions occur through a network node, and there are several network nodes and each backs up the other nodes to provide a robust, reliable network with extremely high availability.
- Preferably and in one example, the agent computing system/money
- 15 transfer system 42 is implemented as a plurality of delivery computers coupled to a database server with a money transfer host computer coordinating operations. The database server is the repository for the message records, and ensures delivery of each record, tracks the time delay between recording and delivery, forces delivery in order of recording, extracts the relevant data to be
- 20 included in the output message, and allows for redelivery of an item where necessary. The message delivery process is initiated by the delivery computers connected to the database server via network nodes or by the network nodes themselves. Each delivery box and network node can request work from

different classes of devices. This allows load balancing, redundancy and efficient use of limited hardware. Positive acknowledgement of delivery of a message by the delivering computer to the database server causes the queued item to be removed from the queue and marked as delivered. The network 5 nodes offer other methods of connectivity and larger bandwidth for bulk delivery of items.

Each delivery computer is preferably configured with several modems and communications lines, with each of these ports configured for a class of traffic which identifies modem speed and type. When the port is available for 10 work, the delivery computer requests a delivery item for that class, and this request is passed by the network node to the money transfer host computer of the agent computing system/money transfer system 48.

Preferably, the money transfer host computer processes single item and bulk delivery requests independent of the others wherein several threads of 15 execution of the same routine may run concurrently with the class of work requested determining which of these routines is executed.

A delivery acknowledgement may be included in the request for work. This acknowledgement contains the control number of the delivered item and provides a positive indication of successful delivery to the receiving device. 20 On the money transfer host computer, the delivery acknowledgement causes the device queue record for the just delivered item to be removed from the queue and the main record to be updated with a delivered status. The acknowledgement may also indicate that no more deliveries can be attempted

on this device on this connection. This would be, for example, due to the receiving device capacity limitations.

- If the receiving device class and the number of deliveries completed on this connection indicate that another item may be delivered, the awaiting 5 delivery queue for this device is examined. If there is another item on the queue, it is selected for delivery and the device record status is updated to reflect this. If there are no more items on the queue, a "no work" response is returned to the requesting delivery computer.

- The money transfer host computer preferably maintains a list of all the 10 single item delivery devices in memory along with the device class, number of items queued for delivery, delivery hours, and the device status. When a request for work comes in, a search is performed through the list of devices from the device record which was last selected. The first device in the specified class, with device queue records on the awaiting delivery queue, and 15 currently open for deliveries is selected and the device ID is passed to the requesting program.

The frequency of requests for work from an idle port diminishes as "no work" responses are returned by the money transfer host computer, which reduces the resources consumed processing non-productive inquiries.

- 20 For clients with large volumes and a richer assortment of technology it may be more practical to collect the single delivery items into files of several thousands. In this process, the network nodes stands in for the delivery computers and requests work for a specific client. There may be several

deliveries in progress concurrently so that the data may be collected faster. These files are then sent to the money transfer host computer according to the needs of the receiving client. Preferably, the same process of marking a delivery queue item for "delivery in progress" and updating the main record 5 occur for these items also.

Preferably aspects of the invention can be embodied in a computer program product, and aspects of the invention described herein can be implemented as logical operations in a computing system. The logical operations, or portions thereof, can be implemented (1) as a sequence of 10 computing implemented steps running on the computing system and (2) as interconnected machine modules within the computing system. The implementation is a matter of choice dependent on the performance requirements of the computing system implementing the invention. Accordingly, the logical operations making up the embodiments or aspects of 15 the invention described herein are referred to variously as operations, steps, or modules.

While the methods disclosed herein has been described and shown with reference to particular steps performed in a particular order, it will be understood that these steps may be combined, sub-divided, or re-ordered to 20 form an equivalent method or methods without departing from the teachings of the present invention. Accordingly, unless specifically indicated herein, the order and grouping of the steps is not a limitation of the present invention.

While the invention has been particularly shown and described with reference to a preferred embodiment thereof, it will be understood by those skilled in the art that various other changes in the form and details may be made without departing from the spirit and scope of the invention.